



**EPA RESPONSIVENESS SUMMARY FOR COMMENTS RECEIVED ON THE  
ENGINEERING EVALUATION/COST ANALYSIS FOR THE  
2000-2012 RICHMOND TERRACE PORTION OF THE JEWETT WHITE LEAD SITE**

## **INTRODUCTION**

This Responsiveness Summary provides a summary of comments received during the public comment period related to the 2000-2012 Richmond Terrace property portion of the Jewett White Lead Site and the responses of the U.S. Environmental Protection Agency (EPA). All comments summarized in this document have been considered in EPA's final decision in the selection of a response action to address the contamination at the site. The responses of New York State Department of Environmental Conservation (NYSDEC) to the public comments have also been taken into account in the Responsiveness Summary.

## **SUMMARY OF COMMUNITY RELATIONS ACTIVITIES**

The March 2011 Proposed Response Action Document, which identified the response action preferred by EPA, in which NYSDEC concurs, and the basis for that preference, and the Engineering Evaluation/Cost Analysis (EE/CA) were made available to the public in both the Administrative Record and information repositories maintained in the EPA Region II Edison, New Jersey office and a local information repository at the Port Richmond Branch of the New York Public Library at 75 Bennett Street, Port Richmond, Staten Island, New York. The notice of availability for these documents was published in the *Staten Island Advance* on March 6 and March 9, 2011 and the *El Diario La Prensa* on March 5, 2011. A public comment period was held from March 4, 2011 to April 17, 2011. On March 16, 2011 EPA conducted a public meeting at the Port Richmond CYO, 120 Anderson Avenue, Staten Island, New York to present the findings of the EE/CA and answer questions from the public about the site and the response actions under consideration. Local residents, representatives from local community groups, representatives from the media, and local government officials, attended the public meeting.

## **OVERVIEW**

The public supports EPA's selected non-time critical removal action<sup>1</sup>, which consists of removing approximately 4,242-cubic yards of soil and backfilling the excavation with certified clean soil from an approved off-site source. Responses to the comments received at the public meeting and in writing during the public comment period are summarized below. Attached to this Responsiveness Summary are the following Appendices:

- Appendix 1 - Documentation of concurrence with the preferred removal action alternative for a CERCLA Non-Time Critical Removal Action at the Jewett White Lead Company Site, Staten Island, Richmond County, New York (January 31, 2011)
- Appendix 2 - Proposed Response Action Document (March 2011)
- Appendix 3 - Public Notice Published in the *Staten Island Advance* on March 6 and March 9, 2011
- Appendix 4 - Public Notice Published in the *El Diario La Prensa* on March 5, 2011
- Appendix 5 - EPA Press Release *EPA Seeks Public Input on Cleanup Options for Lead-Contaminated Site in Staten Island, NY* (March 8, 2011)
- Appendix 6 - Letters and E-mails Submitted During the Public Comment Period
- Appendix 7 - March 16, 2011 Public Meeting Transcript

<sup>1</sup>The selected response action is considered non-time critical because, although there is a threat to public health, welfare, or the environment, there is sufficient planning time available before the removal action is to be initiated.

## SUMMARY OF COMMENTS AND RESPONSES

Throughout the public comment period, EPA received comments from 28 sources, including 12 private citizens and the following groups or individuals:

Congressman Michael G. Grimm  
Staten Island Office of the Borough President  
Councilwoman Debi Rose  
The North Shore Waterfront Conservancy of Staten Island, Inc. (NSWC)  
New York State Department of Environmental Conservation (NYSDEC)  
Port Richmond Improvement Association  
Northfield LDC  
Project Hospitality  
Staten Island Economic Development Corporation  
Coalition for Healthy Ports  
Staten Island Advance  
NL Industries, Inc.

A public meeting was conducted on March 16, 2010, in Port Richmond, Staten Island to present EPA's preferred removal action for the 2000-2012 Richmond Terrace property portion of the Jewett White Lead Site and respond to questions about the preferred removal action. A transcript of the meeting was prepared. This Responsiveness Summary includes a summary of verbal comments received at the public meeting and corresponding EPA responses. In some instances, the original responses EPA made during the public meetings have been supplemented with additional information for a more complete response.

The various comments received on the EE/CA and EPA's preferred response action document from all parties are presented in this Responsiveness Summary with corresponding EPA responses. The comments include the verbal comments received during the public meeting and written comments submitted to the EPA. Comments and responses presented in this Responsiveness Summary are numbered sequentially with no other designation. The order in which the comments appear has no particular relevance.

A number of the comments received on the preferred response action were expressed by more than one party. The goal in preparing this responsiveness summary was to ensure that the public clearly understands EPA's position on issues raised in the comments received and the rationale which supports EPA's decision for the removal action at the 2000-2012 Richmond Terrace property portion of the Jewett White Lead Site. All documents referenced in this Responsiveness Summary are included in the Administrative Record for the Jewett White Lead Site.

A summary of the comments provided at the March 16, 2011 public meeting and contained in the letters and e-mails that were received during the public comment period, as well as EPA and NYSDEC responses to them, have been organized into the following topics:

- Response Action Implementation
- Health Concerns
- Response Action Evaluation
- Additional Site Investigations
- Communicating Project Status
- Future Use of Site
- Interim Removal Action at 2000-2012 Richmond Terrace Property

A summary of the comments and concerns and the responses, thereto, are provided below:

## **Response Action Implementation**

### **Comment #1:**

*A number of commenters expressed support for the selected response action.*

### **Response #1:**

EPA relies on public input to ensure that the concerns of the community are considered in selecting an effective response action for each Superfund site. Several members of the Port Richmond Community have provided the EPA with written and verbal expressions of support for the selected removal action, Alternative 2: Excavation and Off-site Disposal/Treatment of the lead contaminated soils at the 2000-2012 Richmond Terrace property portion of the Jewett White Lead Site. The Port Richmond Community is strongly in favor of selecting a removal action that would provide a permanent solution, rather than selecting a removal action that would require long-term monitoring and maintenance by either the property owner or the EPA.

EPA appreciates the commenters' expression of support for the selected removal action, Alternative 2.

### **Comment #2:**

*Several commenters expressed concern that removal activities at the Jewett White Lead Site will not be conducted in a manner that prevents the migration of dust generated during all phases of the removal process or prevents the migration of lead contaminated soils via run-off caused by erosion of the site soils during precipitation events.*

### **Response #2:**

EPA will ensure that necessary precautions are in place to protect the public from exposure to site contaminants while sampling and cleanup activities are taking place on the Jewett Site.

As part of the cleanup effort, a Community Air Monitoring Plan will be developed and implemented. This plan will include procedures for real-time air monitoring for dust and chemical contaminants and recommended measures (e.g. water misting, smaller work areas, slower truck speeds, temporary work stoppage) to keep airborne releases to a minimum in and around the work areas. If elevated levels of contaminants are detected during air and dust monitoring in and around the work area or on the perimeter of the Site, then the removal activities will be shut down and measures will be taken until the problem can be rectified. These measures may include closing the sidewalks adjoining the property during cleanup activities, which would be done in coordination with officials from the City of New York.

### **Comment #3:**

*A commenter asked if EPA will be including other people and City agencies in the decision making process during the removal action.*

### **Response #3:**

The Jewett White Lead Site is a federal lead site. However, EPA has been and will continue to coordinate all removal activities with the City of New York and the State of New York. EPA will continue to keep the City and State informed of all actions that EPA has taken and plans to take at the Jewett White Lead Site.

**Comment #4:**

*A commenter asked where the soil will be taken and how it will be treated if EPA does select option 2.*

**Response #4:**

Excavated soils will be treated as necessary to reduce the mobility of lead and disposed at an appropriate landfill in accordance with state and federal environmental regulations.

**Comment #5:**

*A commenter asked where is the money coming from to pay for the cleanup.*

**Response #5:**

The money spent on investigations for the Jewett White Lead Site has come from federal funds. Responsible parties under CERCLA will be asked to implement the selected removal action. If these parties are unwilling or unable to perform the response action, then EPA will conduct the work using federal funds. EPA may then seek to recover the expended costs from the responsible parties.

**Comment #6:**

*A commenter asked if there will be grant money made available to help the owner of the contaminated property do the work.*

**Response #6:**

There are different types of contaminated or potentially contaminated properties in the United States. Some are "Superfund sites" – sites where the federal government is, or plans to be, involved in cleanup efforts, many of which are listed on the National Priorities List (NPL); or where immediate action needs to be taken, properties at which EPA is conducting removal actions. Other properties may be considered "brownfields:" abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

While CERCLA also includes authority for EPA to provide grant funding for the assessment and cleanup of brownfield sites, brownfields grant funds may not be used for the cleanup of a contaminated property for which the recipient of the grant or loan may be potentially liable under CERCLA §107 such as a current owner of a site. CERCLA is a strict liability statute that holds potentially responsible parties (PRPs) jointly and severally liable, without regard to fault, for cleanup costs incurred in response to the release or threatened release of hazardous substances. Under CERCLA § 107, a person may be considered a PRP if the person:

- Is the current owner or operator of the contaminated property;
- Owned or operated the property at the time of the disposal of the hazardous substance;
- Arranged for the hazardous substances to be disposed of or treated, or transported for disposal or treatment; or
- Transported the hazardous substances to the property.

A property owner that falls into one of the classes of PRPs described above may be potentially liable under CERCLA. Fortunately, CERCLA includes liability exemptions, affirmative defenses, and

protections that may apply to local governments. Additionally, EPA has enforcement discretion guidance and site-specific tools that may address concerns about potential CERCLA liability.

For a more detailed discussion of Brownfields sites eligible for funding, please refer to the Appendices of the Proposal Guidelines for Brownfields Assessment, Revolving Loan Fund and Cleanup Grants on the EPA website at: [www.epa.gov/brownfields](http://www.epa.gov/brownfields).

## Health Concerns

### Comment #7:

*Several commenters asked whether the bus stops located immediately adjacent the 2000-2012 Richmond Terrace property will remain open or be relocated during the cleanup activities. They expressed concern for the health and welfare of residents and children waiting to board buses while ground intrusive work is occurring at the Site.*

### Response #7:

In April 2009 the property owner implemented an interim removal action under EPA oversight at the 2000-2012 Richmond Terrace property portion of the Jewett White Lead Site. These actions included the installation of hay bales and a silt fence to control stormwater runoff, application of grass seed and mulch to hold soil in place, repairs to existing fencing to prevent trespassers from accessing the area, installation of warning signs and the removal of soil and sediment from the sidewalks and curbs adjacent the property. These controls reduce the potential for contamination to migrate off the site until a cleanup plan is developed for the site.

During ground intrusive sampling performed at the Jewett White Lead Site by the EPA, lead was not detected in the perimeter air samples above both worker safety and National Ambient Air Quality Standards (NAAQS). Based upon the results of the air sampling and the controls put in place to limit the migration of contaminants from the site, there is no need to relocate the two Metropolitan Transit Authority (MTA) bus stops at this time. While EPA does not have the authority to determine the locations of MTA bus stops, we will evaluate the safety of the community as part of the planning process for the cleanup of the Site, and will ensure that appropriate precautions are in place to protect the public from exposure while sampling and cleanup activities are taking place on the Jewett Site.

As discussed in Response to Comment #2 above, a Community Air Monitoring Plan will be developed which will monitor air and dust to keep airborne releases to a minimum around the work areas and to protect the public from exposure to any contaminants during the cleanup activities at 2000-2012 Richmond Terrace. If it is deemed necessary to temporarily relocate the bus stops adjacent the 2000-2012 Richmond Terrace property during the removal action at the 2000-2012 Richmond Terrace property, EPA will work with the appropriate government agencies of the City of New York, including the MTA, to arrange for a temporary relocation of the bus traffic at or near the Site.

### Comment #8:

*Two commenters wanted to know if residents who lived next to the Jewett White Lead Site were able to garden safely in their yards.*

### Response #8:

During the off-site sampling performed in June 2009, EPA collected soil samples from neighboring properties and found lead levels that ranged from 11 ppm to 3,510 ppm, with an average surface lead contamination of 549 ppm. The possibility of contamination at a garden site should not keep you from planning an urban garden.

Generally when lead concentrations are in the 400 to 1,200 ppm range, which is quite common for urban areas, it is still possible to safely garden if proper precautions are observed. If you have a garden or plan

to have a garden, the following steps can be taken to minimize exposure to elevated levels of lead present in the soil:

- Add organic matter such as compost, manure, or phosphate containing fertilizers to garden soil. The organic matter binds lead and reduces the amount available to plants. Organic mulch, such as straw, grass clippings, or wood chips can reduce the dust and the “splatter” of soil onto leafy vegetables from rain.
- If the soil is acidic, add lime to the garden to reduce the acidity. Acidic soil increases the amount of lead available to plants.
- Install raised-bed gardens and supplement with clean topsoil.
- Discard the outer leaves of greens, especially from the bottom of plants, before washing. Soil particles are most likely to be located on the outer leaves of leafy plants.
- Wash produce using running water.
- Peel vegetables, especially root vegetables, which are in direct contact with soil.
- Locate gardens away from old painted buildings and roads with heavy traffic.
- Watch over small children to stop them from eating soil through hand-to-mouth play.
- Wash hands immediately after gardening and before eating to avoid accidentally eating soil.
- Wear gloves as a barrier between your hands and the soil.
- Avoid bringing contaminated soil into the home by:
  - Cleaning tools, gloves and shoes before bringing them indoors.
  - Putting highly soiled clothes in a bag before bringing them indoors and washing them promptly in a separate load.
  - Washing off excess dirt from crops, especially root crops and leafy vegetables, before bringing them indoors.

Additional information on gardening in urban environments can be found at the following website:  
<http://www.clu-in.org/ecotools/urbangardens.cfm>

## Response Action Evaluation

### Comment #9:

*A commenter asked if phytoremediation was considered as a removal action alternative during the Engineering Evaluation.*

### Response #9:

Phytoremediation is the direct use of living plants for *in situ* remediation of contaminated soil, sludges, sediments, and groundwater through contaminant removal, degradation, or containment. Phytoremediation was not considered as a removal action alternative because this technology has not been shown to be effective in mitigating threats to human health and the environment at sites similar to the Jewett White Lead Site.

There are several distinct limitations to the application of phytoremediation at this site that precluded the consideration of this technology as a removal action alternative:

- Phytoremediation is mostly limited to the treatment of surficial contamination due to the generally shallow distribution of plant roots. The root zones of most metal accumulators are limited to the top foot of soil. Either the plants must be able to extend roots to the contaminants, or the contaminated media must be moved to within range of the plants. This movement can be accomplished with standard agricultural equipment and practices, such as deep plowing to bring soil from 2 or 3 feet deep to within 8 to 10 inches of the surface for shallow-rooted crops and grasses, activities that can create fugitive dust emissions.
- More time may be required to phytoremediate a site as compared with other more traditional cleanup technologies, since phytoremediation is limited by the growth rate of the plants. Excavation and disposal or incineration takes weeks to months to accomplish, while phytoextraction or degradation may need several years.
- High lead concentrations (like those found at the Site) may be phytotoxic, and prevent plant growth. In addition, plant matter that is contaminated will require either proper disposal or an analysis of risk pathways. Harvesting and proper disposal is required for plant biomass that accumulates heavy metals within the plant. The biomass may be subject to regulatory requirements for handling and disposal, and an appropriate disposal facility will need to be identified. Should the phytoremediation effort fail, an increased mass of material will need to be remediated.
- A phytoremediation system can lose its effectiveness during the winter (when plant growth slows or stops) or when damage occurs to the vegetation from weather, disease, or pests.
- Amendments and cultivation practices might have unintended consequences on contaminant mobility. For example, application of many common ammonium containing fertilizers can lower the soil pH, which might result in increased metal mobility and leaching of metals to the groundwater.
- Phytoremediation is inconsistent with the current land use.



**Comment #10:**

*A commenter stated that an institutional control coupled with a containment option 1, such as Alternative 4 (Paving), is an appropriate remedy for the 2000-2012 Richmond Terrace portion of the Site but that EPA's preferred response action (Excavation) was selected on the erroneous assumption that the current property owner of 2000-2012 Richmond Terrace would not agree to an institutional control on its property.*

**Response #10:**

The commenter is incorrect in stating that the main reason for EPA's preferred response action, Alternative 2 (Excavation and Off-site Treatment/Disposal), is based on the assumption that the current property owner would not agree to an institutional control for the 2000-2012 Richmond Terrace portion of the Jewett White Lead Site. As stated in the EPA *Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA*, "the purpose of the comparative analysis is to identify the advantages and disadvantages of each alternative relative to one another so that key tradeoffs that would affect the remedy selection can be identified.

The removal action alternatives were evaluated against the following three criteria: Effectiveness, Implementability, and Cost.

- *Effectiveness:* The ability of the alternative to meet the objectives within the scope of the removal action in terms of overall protection of public health and the environment, compliance with ARARs and other guidance, long-term effectiveness and permanence, short-term effectiveness, and reduction of toxicity, mobility or volume;
- *Implementability:* The technical and administrative feasibility of implementing an alternative and the various services and materials required during the implementation;
- *Cost:* The projected cost of each alternative.

**Effectiveness-****Overall Protection of Public Health and the Environment:**

Removal Alternative 2 (excavation and off-Site disposal) would be the most protective removal action, since the risk of incidental contact with waste by humans and ecological receptors and the potential for contaminant migration from the property would be eliminated by permanently removing the contaminated soils. Removal Alternative 4 (paving) would be protective of human health and the environment; however, it is less protective than Removal Alternative 2 because the potential is greater for direct contact with principle threat wastes if the cap is disturbed or breached. This removal action reduces the risk of incidental contact with waste by humans and ecological receptors by containing the contaminated soil; however, future activities at the property would be restricted by this removal alternative.

**Compliance with ARARs:**

EPA in consultation with NYSDEC has established a site-specific Preliminary Remediation Goal (PRG) of 800 mg/kg lead for the Jewett White Lead Site, based in part on the Regional Screening Levels for Contaminants at Superfund Sites, Streamlined Human Health Risk Assessment and NYSDEC Part 375 SCOs. Removal Alternative 2 (excavation and off-Site treatment/disposal) will comply with the ARARS and would remove all soils that exceed the site specific PRG. Removal Alternative 4 would also comply

with ARARs, but would not comply with To Be Considered (TBCs), and other criteria. Under Alternative 4 soils will remain in place that exceed the site specific PRGs, however the threat of exposure to the contaminated soils would be greatly reduced by requiring the containment/capping of all those soils and waste material that exceed the PRGs.

#### Long-Term Effectiveness and Permanence

Removal Alternative 2 (excavation and off-Site treatment/disposal) would provide a high degree of long-term protection of human health and the environment by eliminating the possibility of exposure to contaminants on-Site and the potential for contaminants migrating from the property. The removal of the contaminated soils under Removal Alternative 2 would be effective and permanent.

Removal Alternative 4 (paving) would provide a high degree of long-term protection of human health and the environment; however, the potential exists for direct contact with contaminants if the asphalt cap is disturbed or breached. The depth of the protective cap in this removal alternative, as opposed to Removal Alternative 2 and is significantly less and thus less protective.

#### Reduction of Toxicity, Mobility, or Volume Through Treatment

Under Removal Alternative 2 (excavation and off-site treatment/disposal), contaminants above the PRG would be removed from the property for treatment/disposal, thereby reducing their toxicity, mobility, and volume. It is not known; however, to what extent the excavated soils would require treatment prior to disposal under this alternative.

Removal Alternative 4 (paving) includes the reduction of toxicity through treatment for that portion of soil removed from the property and treated as a result of TCLP failure (estimated at 500 cubic yards). The mobility or volume of contaminated soil that would be left on-site would not be reduced through treatment. While Alternative 4 would reduce the migration of and potential exposure to contaminated soils and waste materials, the principle threat wastes would remain in place and the potential remains for direct contact with the principle threat wastes if the asphalt cap is disturbed or breached.

#### Short-Term Effectiveness

Removal Alternative 2 and Alternative 4 would involve excavating, moving, placing, and, in the case of Alternative 4, re-grading waste. While these removal action alternatives present some risk to on-site workers through dermal contact and inhalation, these exposures can be minimized by utilizing proper protective equipment and engineering controls. The vehicle traffic associated with cap construction and the off-site transport of contaminated soils could impact the local roadway system and nearby residents through increased noise level. Alternative 2 would require the off-site transport of a considerable amount of contaminated soil. Alternative 4 would require the delivery of cap construction materials, and off-site transport of a much lower volume of contaminated soil removed to re-grade the property.

Under all of the removal action alternatives except the no action alternative, disturbance of the land during excavation and/or construction activities could affect the surface water hydrology of the property. There is a potential for increased stormwater runoff and erosion during excavation and construction activities that would have to be properly managed to prevent excessive water and waste material loading. Appropriate measures would have to be taken during excavation activities to prevent transport of fugitive dust and exposure of workers and downgradient receptors to contaminants.

### **Implementability-**

Removal Alternative 2 (excavation and off-Site treatment/disposal) would use proven earthmoving equipment and techniques and established administrative procedures, and sufficient facilities are available for treatment and disposal of the excavated soils. Therefore, this alternative would be easily implemented.

Removal Alternative 4 (paving) can be accomplished using technologies known to be reliable and readily implemented. Equipment, services and materials for this work are readily available. The actions under this alternative may be administratively difficult since the property owner would have to agree to the granting of an institutional control such as an environmental easement for the controlled property. In addition, the property owner may be required to maintain a Site Management Plan in perpetuity to ensure the institutional and engineering controls remain in place and are effective.

### **Cost-**

While Alternative 2 has a substantially higher cost (\$924,153) than the other removal alternatives, it compares favorably to the remaining alternatives and provides a proportionately higher level of protection of human health and the environment. In addition, the excavation and disposal of the lead contaminated soils would result in a permanent action that requires no additional long-term oversight and/or maintenance. Alternative 2

In summation, considering the three evaluation criteria for selecting removal alternatives, Alternative 2 best meets the removal action objectives for this site, provides a proportionately higher level of protection to human health and the environment, is the alternative that meets all of the removal action objectives established in the EE/CA and is supported by the Community of Port Richmond and the New York State Department of Environmental Conservation. This is the basis for selection of Alternative 2 (Excavation and Off-site Treatment/Disposal) for the removal action at the 2000-2012 Richmond Terrace portion of the Jewett White Lead Site

### **Comment #11:**

*A commenter stated that Alternative 4 (Paving) is consistent with EPA and NYSDEC Brownfields policies and guidelines, which are intended to put impaired properties back to productive use.*

### **Response #11:**

The Jewett White Lead Site is not a Brownfields site. While Brownfields grants are available to return abandoned or underutilized properties to productive use, the EPA Brownfields program is not an appropriate mechanism to initiate a cleanup of the Jewett White Lead Site.

Brownfields Cleanup grants provide funding for a grant recipient to carry out cleanup activities at brownfield sites. Funds may be used to address sites contaminated by petroleum and/or hazardous substances, pollutants, or contaminants (including hazardous substances comingled with petroleum). These grants are awarded on a competitive basis, and are not a guarantee. To qualify for a Brownfields grant, an applicant would need to prepare a proposal for review that would meet the threshold and ranking criteria outlined in the Proposal Guidelines for Brownfields Assessment, Revolving Loan Fund, and Cleanup grants. To date, no entity has applied for a Brownfields Grant to address the Jewett White Lead Site.

In a Removal Site Evaluation dated April 24, 2009, EPA determined that a CERCLA removal action is warranted to address the potential threats posed by the presence of waste and contaminated soil at the Jewett White Lead Site. Removal actions are taken at sites where a threat or potential threat exists and needs to be addressed in a timely manner.

**Comment #12:**

*A commenter stated that Alternative 4 (Paving) meets the threshold criteria, including compliance with ARARs. The commenter also states that the statement in Section 5.2 of the EE/CA that Alternative 4 will not comply with ARARs is erroneous.*

**Response #12:**

The overall protection of human health and the environment and compliance with ARARs are threshold requirements that each alternative must meet in order to be eligible for selection (40 CFR §300.430). While Alternative 4 (Paving) meets the threshold criteria, including compliance with ARARs, it is less protective than Alternative 2 (Excavation) because it leaves wastes containing high concentrations of lead in place and the potential remains for direct contact with principle threat wastes if the cap is disturbed or breached. This alternative reduces the risk of incidental contact with waste by humans and ecological receptors by containing the contaminated soil; however it leaves source material in place.

Alternative 4 (paving) complies with ARARs, however, this alternative does not comply with To Be Considered (TBCs) criteria since soils will remain in place that exceed the site specific Preliminary Remediation Goals (PRGs).

EPA agrees that the statement in Section 5.2 of the EE/CA that Alternative 4 will not comply with ARARs is an inadvertent error.

**Comment #13:**

*A commenter stated that EPA's proposed removal, Alternative 2 (Excavation and Disposal), greatly exceeds the work required by EPA's own guidance to protect humans and the environment at a residential property, even though the Site is an industrial/commercial site, and thus the basis for selecting Alternative 2 is not supported by the site specific conditions or the comparative analysis of alternatives provided in the EE/CA. The Commenter also states that Alternative 4 (Paving) would minimize negative life-cycle impacts associated with the proposed remedy and is more consistent with EPA's Superfund Green Remediation Strategy.*

**Response #13:**

EPA disagrees that Alternative 2 is not supported by site-specific conditions or the comparative analysis provided in the EE/CA. While the commenter states that the only basis EPA provides for selecting Alternative 2 is that Alternative 2 is a "permanent" solution and provides a "proportionately higher level of protection for human health and the environment", EPA would like to point out that several reasons besides those re-stated above were provided in the EE/CA for the selection of Alternative 2 (Excavation and Off-Site Treatment/Disposal). Under section 5.0 Comparative Analysis of Alternatives and Recommended Response Action of the EE/CA, EPA provides a comparative analysis summary of all five removal action alternatives, which includes the reasons that Alternative 2 was selected as the preferred removal alternative for this site. Please see Reponse #10 above.

Alternative 2 (excavation and off-Site treatment/disposal) would be the most protective alternative, since the risk of incidental contact with waste by humans and ecological receptors and the potential for contaminant migration from the property would be eliminated by permanently removing the contaminated soils. Alternative 2 (excavation and off-Site treatment/disposal) would provide a high degree of long-term protection of human health and the environment by eliminating the possibility of exposure to contaminants on-Site and the potential for contaminants migrating from the property. The removal of the contaminated soils under Alternative 2 would be effective and permanent.

EPA disagrees that the additional protections provided by the excavation and removal of the lead-contaminated soils is negligible. Alternative 2 (Excavation) provides a permanent action that addresses the elevated concentrations of lead present in the soils at the surface and at depth on the 2000-2012 Richmond Terrace property portion of the Jewett White Lead Site. This permanent action would result in preventing the migration of lead-contaminated soils into the ground water or onto neighboring properties. It also eliminates the risk of future exposures to the elevated levels of lead present in the Site soils.

Alternative 4, Paving, would not be an appropriate remedy for the 2000-2012 since this removal action would only require the excavation of up to 6" of soil to maintain grade. Elevated levels of lead would be left in place in the soil directly beneath an asphalt cap and at depth. Levels of lead at the concentrations observed at the Jewett White Lead Site are considered source material. Source material is defined as material that includes or contains hazardous substances, pollutants, or contaminants that act as a reservoir for migration of contamination to groundwater, surface water or air, or act as a source for direct exposure.

The average lead concentrations in the field screened soil samples collected at depths of 1-foot, 2-foot, 3-foot, 4-foot, and 5-foot below grade were 7,083 mg/kg, 20,340 mg/kg, 21,070 mg/kg, 14,388 mg/kg, and 5,752 mg/kg, respectively. The highest lead concentration detected in the subsurface was 97,921 mg/kg at the 2- to 3-foot depth interval. This is over 2 orders of magnitude above the 400 mg/kg screening criteria for lead in a residential setting. At this concentration, lead at the Jewett White Lead site should be considered a principal threat waste. Principal threat wastes are those source materials that generally cannot be reliably contained or would present a significant risk to human health or the environment.

EPA's *Superfund Green Remediation Strategy* sets out current plans of the Superfund Remedial Program to reduce the demand placed on the environment during cleanup actions and to conserve natural resources. Cleanup activities use energy, water and material resources to achieve cleanup objectives and these activities can impact surrounding communities, ecosystems, and natural resources. EPA recognizes that the process of cleanup has the unintended consequence of creating its own environmental footprint. We have learned that we can optimize environmental performance and implement protective cleanups that are greener by increasing our understanding of the environmental footprint caused by cleanup activities and avoiding these unintended consequences while ensuring the primary goal of protecting the public health and environment.

Best management practices consistent with EPA's *Superfund Green Remediation Strategy* can be employed during implementation of the selected removal action including using clean fuels and renewable energy sources for vehicles and equipment, retrofitting diesel machinery and vehicles for improved emission controls, reusing construction and routine operational materials, and installing maximum controls for stormwater runoff. Diesel emissions for all alternatives, with the exception of the no action alternative, would pose a particular concern in the Port Richmond area, an environmental justice community that faces a disproportionate burden of potential exposure to environmental hazards.

EPA disagrees that Alternative 4 (Paving) is more consistent with EPA's *Superfund Green Remediation Strategy*. EPA views green remediation as a means to enhance remedy protectiveness, not as a disincentive to active remediation processes or an approach that reduces remedy protectiveness.

**Comment #14:**

*Alternative 2 is inconsistent with the EPA Lead Handbook.*

**Response #14:**

As stated in the *EPA Lead Handbook* Introduction, the *EPA Lead Handbook* "lays out only the minimum considerations for addressing lead-contaminated residential sites and encourages users to refer to appropriate agency guidance and/or policy to conduct more stringent investigation and clean-up activities on a site-specific basis." While the Lead Handbook provides a consistent national approach for assessing and managing risks associated with lead-contaminated residential sites across the country, it is not appropriate for use at the Jewett White Lead site.

The lead concentrations observed in the soils at the 2000-2012 Richmond Terrace property both surficially and at depth, are much higher than concentrations typically seen on residential properties. One soil sample collected at the two foot depth had a lead concentration as high as 240,000 ppm, or 24% lead. At these concentrations, lead at the Jewett White Lead site should be considered a "principal threat waste." Principal threat wastes are those source materials that generally cannot be reliably contained or would present a significant risk to human health or the environment should an exposure occur. These include materials having high concentrations of toxic compounds.

Principle threat wastes generally should be addressed through treatment-oriented remedies, unless impracticable. Immobilization (Alternative 5) satisfies CERCLA's preference for treatment of principle threat wastes, is generally effective for metals, and is a commercially available and demonstrated technology; however, immobilization is not an appropriate removal alternative for this site as stated in the March 2011 Engineering Evaluation/Cost Analysis. Alternative 2 (Excavation) will address the principle threat wastes present on the 2000-2012 Richmond Terrace property, while Alternative 4 (Paving) would leave the principle threat wastes untreated. According to the EPA's *Guide to Principal Threat and Low Level Threat Wastes*, the lead concentrations observed at the Site confirm high toxicity and qualify as a principal threat waste, which is defined as a source material that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. While some source materials can be safely contained or adequately treated at effective costs, the exceedingly high toxicity associated with the high levels of lead at the Site reduces confidence in treatment alternatives due to technical limitations, as well as the long-term reliability of containment.

**Comment #15:**

*EPA has found that neither groundwater nor surface water are being impacted by the Site and thus impact to water is not a basis to support a more stringent remedy.*

**Response #15:**

EPA disagrees with this comment. Groundwater samples were collected from two of the three monitoring wells installed at the 2000-2012 Richmond Terrace property on October 28, 2010. One well, PO-03, was found to be dry at the time of sampling. While lead was not detected in the groundwater samples collected from the two monitoring wells installed at the 2000-2012 Richmond Terrace property, impacts were observed at the 2015 Richmond Terrace property. Detectable concentrations of lead (39 µg/L) were

present in the groundwater sample collected from the 2015 Richmond Terrace property portion of the Jewett White Lead site exceeding the EPA Maximum Contaminant Limit (MCL) (15 µg/L).

Results of TCLP analysis indicate that leachable lead is present in the soils throughout the Jewett White Lead Site. Even though the lead was not observed in the groundwater directly beneath the from 2000-2012 Richmond Terrace property, the potential exists for the lead to leach under certain conditions into the groundwater. A removal action is necessary to ensure that the leachable lead does not migrate into the water table. Source removal is an important part of the comprehensive response action for the area.

Surface water samples were collected in the Kill Van Kull to determine if lead contaminated soils and sediments migrating from the 2000-2012 Richmond Terrace property were impacting the waterway. No observable impacts were found during the sampling conducted in October 2010; however, additional sampling in the Kill Van Kull along the 2015 Richmond Terrace property is required to determine if the Site is impacting the water body. It is premature at this time to state that the Jewett White Lead Site is not impacting the Kill Van Kull.

**Comment #16:**

*A commenter stated that the potential cost of Alternative 2 is significantly underestimated. The cost of this option does not provide a proportionate benefit to health and the environment and is a waste of valuable (and scarce) financial resources.*

**Response #16:**

EPA disagrees that the potential cost of Alternative 2 (Excavation) is significantly understated. EPA believes that the vertical extent of contamination throughout the Site has been delineated and that accurate cost estimates based upon the "Lead-Impacted Soil Isopach Map (included in the March 2011 EE/CA as Figure 3-4 in Attachment III) has been made.

As stated in the EE/CA, under Alternative 2, the excavation of all soils containing lead greater than 800 mg/kg for lead will extend across the Site until a hard surface, such as a roadway or sidewalk, is encountered. The only portion of the 2000-2012 Richmond Terrace property that has not been fully delineated horizontally is associated with sample S-C4 located on the southern boundary of the property adjacent the elevated rail line. Additional soils on the adjacent rail line property may need to be addressed if they exceed the preliminary remediation goal of 800 mg/kg; however, the additional soils are not expected to significantly increase the time or costs associated with the excavation and off-site treatment/disposal of the lead-contaminated soils.

As stated in the Preamble to the 1990 National Oil and Hazardous Substances Pollution Contingency Plan (NCP), "the various criteria have been categorized according to their functions in the remedy selection process as threshold, balancing, and modifying criteria. This designation demonstrates that protection of human health and the environment will not be compromised by other factors, including cost." The Preamble to the 1990 NCP also states that "...tradeoffs among alternatives with respect to the long-term effectiveness and permanence they afford and the reductions in toxicity, mobility, or volume they achieve through treatment are the most important considerations in the balancing step by which the remedy is selected."

The effectiveness and permanence of Alternative 4, paving the 2000-2012 Richmond Terrace property, would be entirely dependent upon the effective maintenance of the asphalt pavement cap and access controls and the proper enforcement of the institutional controls. Since Alternative 4 (Paving) does not permanently address the contamination at the 2000-2012 Richmond Terrace property, the long-term

effectiveness is uncertain. In contrast, the effectiveness and permanence of Alternative 2 (excavation) is not dependent upon the maintenance of a long-term engineering or institutional control and affords a higher level of protection to human health and the environment. It also eliminates a source of contamination which may be affecting the downgradient groundwater.

**Comment #17:**

*A commenter stated that the selection of Alternative 2 is not consistent with EPA's "Presumptive Remedy for Metals-in-Soil Sites" (September 1999).*

**Response #17:**

EPA disagrees that that the selected response action, Alternative 2, is inconsistent with EPA's *Presumptive Remedy for Metals-in-Soil Sites* (September 1999). This guidance identifies the presumptive remedy for contaminated soils constituting principal threat waste at metals-in-soil sites to be: (1) reclamation/recovery, where it is feasible, or (2) immobilization. Although the reclamation/recovery of lead was not evaluated in the EE/CA, the selection of Alternative 2 does not preclude off-site reclamation/recovery as a treatment option. Reclamation/recovery of lead could be incorporated in to Alternative 2 during the planning and implementation phases of the removal action if feasible and practicable.

For low-level threat waste found at metals-in-soil sites, the presumptive remedy is containment. In addition, the NCP states that EPA expects to use "treatment to address the principle threats posed by a site, wherever practicable" and "engineering controls, such as containment, for wastes that pose relatively low long-term threat." (40 CFR. §400.430(a)(1)(iii)).

As stated in Response #13 above, the elevated lead concentrations present in the surface and sub-surface soil at the 2000-2012 Richmond Terrace property are considered a principal threat waste, and these principle threat wastes generally should be addressed through treatment-oriented remedies, unless it is considered impracticable. Containment does not involve treatment, does not reduce toxicity or waste volume, will restrict future uses of a site and is not consistent with the presumptive remedy guidance for principal threat waste.

During public meetings held within the Port Richmond, Staten Island community, there was an overwhelming response from the community requesting EPA take an aggressive approach to addressing the lead-contaminated soils at the Jewett White Lead Site. The *Presumptive Remedy for Metals-in-Soil Sites* (September 1999) states that "if the public expresses strong opposition to the presumptive remedy under consideration, site managers may need to include non-presumptive remedy options in the evaluation. In this case, site managers may evaluate alternative technologies along with the presumptive remedy." EPA's inclusion and selection of Alternative 2 (Excavation) as the preferred removal action remains consistent with the *Presumptive Remedy for Metals-in-Soil Sites* Guidance.

It is important to note that the EPA's *Presumptive Remedy for Metals-in-Soil Sites* (September 1999) is intended solely as guidance, and EPA officials may decide to follow the guidance, or act at variance to the guidance based upon an analysis of specific site circumstances. As stated in the Guidance document "this presumptive remedy guidance should be used unless site-specific factors suggest a contrary approach." The presumptive remedy guidance derived from the mandates of CERCLA §121 and based upon previous Superfund experience was developed as a guideline to communicate the types of remedies that the EPA generally anticipates to find appropriate for specific types of wastes. Site specific information is always taken into consideration when determining the most beneficial remedy for a site. There are various



alternatives that can be considered and one remedy is not always the appropriate remedy for all metal soil sites.

**Comment #18:**

*A commenter stated that Alternative 4 is more appropriate than Alternatives 3 or 5.*

**Response #18:**

EPA disagrees that Alternative 4 (Paving) is more appropriate than Alternatives 3 (Capping) or 5 (Immobilization). As discussed in Section 5.2 Comparative Analysis of Alternatives, Alternative 4 (paving) would be protective of human health and the environment; however, it is less protective than Alternative 3 or Alternative 5 because the depth of the cap is less (6 inches as opposed to 2 feet) and the potential is therefore greater for direct contact with principle threat wastes if the cap is disturbed or breached. As discussed in greater detail in the EE/CA, the effectiveness and permanence of alternative 4 would be dependent upon the effective maintenance of the asphalt pavement cap, access controls, a Site Management Plan, and the proper enforcement of the land-use controls to ensure that the institutional and engineering controls remain in place and are effective. In contrast, Alternative 2, Excavation and Disposal, best satisfies the evaluation criteria based on the comparative analysis used to assess each of the alternative removal actions. EPA's selection of Alternative 2 is based on the proven effectiveness of the action, the ease of implementation, and the relative cost.

**Comment #19:**

*A commenter stated that semi-annual groundwater monitoring for a period of 30 years to verify the success of the removal action is not warranted based on site specific information and should not be required as an element of any removal action option.*

**Response #19:**

EPA disagrees that semi-annual groundwater monitoring for a period of 30 years is not necessary to verify the success of the removal action. Groundwater samples were collected from two of the three monitoring wells installed at the 2000-2012 Richmond Terrace property on October 28, 2010. One well, PO-03, was found to be dry at the time of sampling. While lead was not detected in the groundwater samples collected from the two monitoring wells installed at the 2000-2012 Richmond Terrace property, impacts were observed at the 2015 Richmond Terrace property. Detectable concentrations of lead (39 µg/L) were present in the groundwater sample collected from the 2015 Richmond Terrace property portion of the Jewett White Lead site exceeding the EPA Maximum Contaminant Limit (MCL) (15 µg/L).

TCLP sampling indicates that leachable lead is present in the soils throughout the Jewett White Lead Site. Even though the lead from 2000-2012 Richmond Terrace was not observed in the groundwater directly beneath the property, the potential exists for the lead to leach under proper conditions into the groundwater. The conditions that induce leaching are the presence of lead in soil at concentrations that either approach or exceed the sorption capacity of the soil, the presence in the soil of materials that are capable of forming soluble chelates with lead, and a decrease in the pH of the leaching solution (e.g., acid rain). If lead-contaminated soils are to be left in place, groundwater would need to be monitored to ensure that the selected removal action remains effective and that lead is not migrating into the water table.

**Comment #20:**

*A commenter stated that EPA misstates NL's participation in the EPA process.*

**Response #20:**

The purpose of the responsiveness summary is to respond to comments received on EPA's preferred remedy. It is not appropriate for EPA to respond to any comments discussing a potentially responsible party's participation in the EPA process.

## **Additional Site Investigations**

### **Comment #21:**

*One commenter is very concerned with the Moran property (2015 Richmond Terrace) based upon the reported lead results and its use as an active business with large unpaved areas. The commenter also stated that on p. 3 of EPA's March 2011 report, the average surface lead concentration at the 2015 Richmond Terrace property was 5,082 milligram/kilogram, but the EPA presentation indicated that surface lead concentrations ranged from 145 ppm to 2,730 ppm in surface samples.*

### **Response #21:**

Soil sampling conducted at the 2000-2012 Richmond Terrace property (formerly the location of Sedutto's Ice Cream) revealed the presence of elevated levels of lead throughout most of the property, both laterally and with depth. The average surface lead concentration at this property was 5,081 mg/kg (or ppm). The average lead concentration in the soil samples collected at depths of 1-foot, 2-foot, and 3-foot below grade were 28,245 mg/kg, 61,201 mg/kg, and 53,398 mg/kg, respectively.

On June 15, 2009 EPA collected 14 surficial soil samples from the 2015 Richmond Terrace property (Moran Towing Corp.). The soil samples were collected from portions of this property where exposed soil was present or where the asphalt paving appeared to be in disrepair. Elevated levels of lead were found to be in the samples collected at concentrations that ranged from 145 mg/kg to 2,730 mg/kg, with an average concentration of 1,030 mg/kg.

Additional soil sampling conducted at the 2015 Richmond Terrace property in October 2010, revealed the presence of elevated levels of lead throughout most of the property similar to the concentrations found at the 2000-2012 Richmond Terrace property. The 2015 Richmond Terrace is mostly covered with asphalt paving with only a small portion that is unpaved; however significant portions of the asphalt paving are in serious disrepair.

This property is the subject of a separate, on-going removal investigation. Additional environmental samples collected from the 2015 Richmond Terrace property in August and September 2011 will be analyzed and evaluated to determine what actions are necessary at this property.

### **Comment #22:**

*One commenter asked if the 2015 Richmond Terrace property has a preferred response action, or if it is going to be handled separately. They also asked if the lead is migrating into the water.*

### **Response #22:**

No, the 2015 Richmond Terrace property does not have a preferred response action at this time. Additional information is needed for EPA to determine the most appropriate removal action for this portion of the Jewett White Lead Site.

The additional environmental sampling and analysis to be performed at the 2015 Richmond Terrace property and adjacent properties will provide us information about whether or not the lead contamination is migrating into the groundwater or into the Kill Van Kull.

## Communicating Project Status

### Comment #23:

*One commenter asked if EPA has a timeline for implementing the selected removal action at the 2000-2012 Richmond Terrace property.*

### Response #23:

EPA expects the cleanup of the 2000-2012 Richmond Terrace property will start early in 2012.

### Comment #24:

*Several commenters asked if EPA will continue to share information with the community about the work to be performed at the Jewett White Lead Site.*

### Response #24:

EPA will continue to coordinate with the appropriate New York City and New York State Agencies to ensure that appropriate measures are in place to protect the public during the selected removal action. EPA will also keep the public informed of future actions at the 2015 Richmond Terrace property portion of the Jewett White Lead Site.

EPA will provide updates to the public in the form of Community Fact Sheets that will be distributed in the community and placed in the Administrative Record available for the public to view at the Port Richmond Branch of the New York Public Library and in the Superfund Records Center located at the EPA offices in Edison, New Jersey.

### Comment #25:

*One commenter asked if EPA publishes materials, documents, and fact sheets, in Spanish as well as English.*

### Response #25:

Yes. All documents generated by EPA for distribution to the public have been published in both English and Spanish. EPA will continue to publish bilingual documents for the Jewett White Lead site.

## **Future Use of Site**

### **Comment #26:**

*One commenter expressed concern about informing future property owners of work performed by EPA at the property. The commenter asked if there would be any kind of flag on the property if the zoning is changed.*

### **Response #26:**

EPA will maintain records that a removal action was taken at the Jewett White Lead Site, and that the removal action will only address soils with lead concentrations greater than 800 mg/kg. If a zoning change is proposed at some date in the future for this property, then it would be incumbent upon the current property owner at the time of the zoning change to ensure that the removal action remains protective to public health and the environment.

## **Interim Removal Action at 2000-2012 Richmond Terrace Property**

### **Comment #27:**

*One commenter asked how stable the 2000-2012 Richmond Terrace property is now, and if EPA is taking actions to ensure it is stabilized.*

### **Response #27:**

As stated in Response #7, the property owner implemented an interim removal action under EPA oversight at the 2000-2012 Richmond Terrace property portion of the Jewett White Lead Site in April 2009. The control measures in place reduce the potential for lead contaminated soils to migrate off the property until a cleanup plan is developed.

During ground intrusive sampling performed at the Jewett White Lead Site by the EPA, lead was not detected in the perimeter air samples above both worker safety and National Ambient Air Quality Standards (NAAQS). Based upon the results of the air sampling and the controls put in place to limit the migration of contaminants from the site, the site is currently stable. The interim removal action implemented at the 2000-2012 Richmond Terrace property is only temporary, and EPA will implement a more permanent removal action to ensure that the measures taken at the property remain protective should the temporary measures deteriorate over time.

EPA will continue to evaluate the safety of the community as part of the planning process for the cleanup of the site, and will ensure that appropriate actions are taken to protect the community during the cleanup.

### **Comment #28:**

*One commenter inquired about the frequency of EPA's visits to the Jewett White Lead Site.*

### **Response #28:**

EPA visits the site as needed to conduct on-going investigations and to ensure that existing site controls remain intact and are effective in protecting the public. As such, the frequency of these visits varies. EPA will be present to provide oversight for all removal activities at the Jewett White Lead Site.

### **Comment #29:**

*One commenter asked if it is the property owner's responsibility to maintain the interim removal action.*

### **Response #29:**

Yes. The maintenance of the interim removal measures is the responsibility of the current property owner. It will also be the responsibility of the property owner and future property owners to ensure that removal actions taken at the property remain protective of human health and the environment.